



## SEQUENCE LISTING

<110> DeGroot, Anne

<120> Human T Cell Response to MHC-Binding Motif Clusters

<130> 17999-004 US

<140> 09/813,333

<141> 2001-03-20

<150> 60/190,834

<151> 2000-03-20

<160> 81

<170> PatentIn Ver. 2.1

<210> 1

<211> 18

<212> PRT

<213> Mycobacterium tuberculosis

<400> 1

Met Leu Gly Asn Ala Pro Ser Val Val Pro Asn Thr Thr Leu Gly Met  
1 5 10 15

His Cys

<210> 2

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 2

Gly Ser Phe Gly Ser Ala Pro Ser Asn Gly Trp Leu Lys Leu Gly Leu  
1 5 10 15

Val Glu Phe Gly  
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<210> 3

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 3

Leu Lys Leu Gly Leu Val Glu Phe Gly Gly Val Ala Lys Leu Asn Ala  
1 5 10 15

Glu Val Met Ser  
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<210> 4

<211> 13  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 4  
Gln Ala Val Met Leu Gly Thr Gly Thr Pro Asn Arg Ala  
1 5 10

<210> 5  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 5  
Cys Glu Val Trp Ser Asn Val Ser Glu Thr Ile Ser Gly Pro Arg Leu  
1 5 10 15

Tyr Gly Glu Met  
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<210> 6  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 6  
Val Ser Glu Thr Ile Ser Gly Pro Arg Leu Tyr Gly Glu Met Thr Met  
1 5 10 15

Gln Gly Thr Arg  
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<210> 7  
<211> 20  
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<213> Mycobacterium tuberculosis

<400> 7  
Arg Ser Leu Phe Pro Glu Phe Ser Glu Leu Phe Ala Ala Phe Pro Ser  
1 5 10 15

Phe Ala Gly Leu  
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<210> 8  
<211> 20  
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<213> Mycobacterium tuberculosis

<400> 8  
Phe Ser Glu Leu Phe Ala Ala Phe Pro Ser Phe Ala Gly Leu Arg Pro  
1 5 10 15

Thr Phe Asp Thr

<210> 9  
 <211> 13  
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<400> 9  
 Ala Glu Leu Pro Gly Val Asp Pro Asp Lys Asp Val Asp  
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<210> 10  
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 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 10  
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<210> 11  
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 <213> Mycobacterium tuberculosis

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<210> 12  
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 <213> Mycobacterium tuberculosis

<400> 12  
 Gly Ile Leu Thr Val Ser Val Ala Val Ser Glu Gly Lys Pro Thr Glu  
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Lys

<210> 13  
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 <213> Mycobacterium tuberculosis

<400> 13  
 Val Ala Val Ala Gly Ala Ala Ile Leu Val Ala Gly Leu Ser Gly Cys  
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Ser Ser Asn

<210> 14  
<211> 17  
<212> PRT  
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<400> 14  
Gln Asn Val Thr Gly Ser Val Val Cys Thr Thr Ala Ala Gly Asn Val  
1 5 10 15

Asn

<210> 15  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 15  
Ile Ala Ile Gly Gly Ala Ala Thr Gly Ile Ala Ala Val Leu Thr Asp  
1 5 10 15

Gly Asn Pro Pro  
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<210> 16  
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<213> Mycobacterium tuberculosis

<400> 16  
Val Thr Leu Gly Tyr Thr Ser Gly Thr Gly Gln  
1 5 10

<210> 17  
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<400> 17  
Ser His Tyr Lys Ile Thr Gly Thr Ala Thr Gly Val Asp  
1 5 10

<210> 18  
<211> 15  
<212> PRT  
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<400> 18  
Leu Pro Val Glu Tyr Leu Gln Val Pro Ser Pro Ser Met Gly Arg  
1 5 10 15

<210> 19

<211> 13  
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<400> 19  
Ala Leu Tyr Leu Leu Asp Gly Leu Arg Ala Gln Asp Asp  
1 5 10

<210> 20  
<211> 16  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 20  
Ser Val Val Met Pro Val Gly Gly Gln Ser Ser Phe Tyr Ser Asp Trp  
1 5 10 15

<210> 21  
<211> 12  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 21  
Thr Phe Leu Thr Ser Glu Leu Pro Gly Trp Leu Gln  
1 5 10

<210> 22  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 22  
Arg His Val Lys Pro Thr Gly Ser Ala Val Val Gly Leu Ser Met Ala  
1 5 10 15

Ala Ser Ser Ala  
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<210> 23  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 23  
Val Gly Leu Ser Met Ala Ala Ser Ser Ala Leu Thr Leu Ala Ile Tyr  
1 5 10 15

His Pro Gln Gln  
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<210> 24  
<211> 20  
<212> PRT

<213> Mycobacterium tuberculosis

<400> 24

Leu Ala Ile Tyr His Pro Gln Gln Phe Val Tyr Ala Gly Ala Met Ser  
1 5 10 15

Gly Leu Leu Asp  
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<210> 25

<211> 18

<212> PRT

<213> Mycobacterium tuberculosis

<400> 25

Pro Leu Leu Asn Val Gly Lys Leu Ile Ala Asn Asn Thr Arg Val Trp  
1 5 10 15

Val Tyr

<210> 26

<211> 16

<212> PRT

<213> Mycobacterium tuberculosis

<400> 26

Lys Phe Leu Glu Gly Phe Val Arg Thr Ser Asn Ile Lys Phe Gln Asp  
1 5 10 15

<210> 27

<211> 13

<212> PRT

<213> Mycobacterium tuberculosis

<400> 27

Gly Val Phe Asp Phe Pro Asp Ser Gly Thr His Ser Trp  
1 5 10

<210> 28

<211> 12

<212> PRT

<213> Mycobacterium tuberculosis

<400> 28

Glu Tyr Trp Gly Ala Gln Leu Asn Ala Met Lys Pro  
1 5 10

<210> 29

<211> 13

<212> PRT

<213> Mycobacterium tuberculosis

<400> 29  
Pro Ser Met Gly Arg Asp Ile Lys Val Gln Phe Gln Ser  
1 5 10

<210> 30  
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<212> PRT  
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<400> 30  
Ser Gly Leu Ser Val Val Met Pro Val Gly Gly Gln Ser  
1 5 10

<210> 31  
<211> 18  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 31  
Val Val Gly Leu Ser Met Ala Ala Ser Ser Ala Leu Thr Leu Ala Ile  
1 5 10 15

Tyr His

<210> 32  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 32  
Ala Ile Tyr His Pro Gln Gln Phe Val Tyr Ala Gly Ala Met Ser Gly  
1 5 10 15

Leu Leu Asp Pro  
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<210> 33  
<211> 13  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 33  
Lys Leu Ile Ala Asn Asn Thr Arg Val Trp Val Tyr Cys  
1 5 10

<210> 34  
<211> 13  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 34  
Pro Thr Gly Ser Ala Val Val Gly Leu Ser Met Ala Ala

1 5 10

<210> 35  
<211> 17  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 35  
Gln Phe Val Tyr Ala Gly Ala Met Ser Gly Leu Leu Asp Pro Ser Gln  
1 5 10 15

Ala

<210> 36  
<211> 19  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 36  
Pro Leu Leu Asn Val Gly Lys Leu Ile Ala Asn Asn Thr Arg Val Trp  
1 5 10 15

Val Tyr Cys

<210> 37  
<211> 21  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 37  
Lys Ile Arg Leu His Thr Leu Leu Ala Val Leu Thr Ala Ala Pro Leu  
1 5 10 15

Leu Leu Ala Ala Ala  
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<210> 38  
<211> 21  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 38  
Asp Met Ala Ala His Lys Gly Leu Met Asn Ile Ala Leu Ala Ile Ser  
1 5 10 15

Ala Gln Gln Val Asn  
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<210> 39  
<211> 19  
<212> PRT



<213> Mycobacterium tuberculosis

<400> 39

Pro Gly Val Ser Glu His Leu Lys Leu Asn Gly Lys Trp Leu Ala Ala  
1 5 10 15

Met Tyr Gln

<210> 40

<211> 13

<212> PRT

<213> Mycobacterium tuberculosis

<400> 40

Ala Ala Leu Asn Pro Gly Val Asn Leu Pro Gly Thr Ala  
1 5 10

<210> 41

<211> 13

<212> PRT

<213> Mycobacterium tuberculosis

<400> 41

Pro Gly Phe Gly Thr Thr Val Asp Pro Pro Ala Val Pro  
1 5 10

<210> 42

<211> 12

<212> PRT

<213> Mycobacterium tuberculosis

<400> 42

Leu Leu Pro Asp Ala Gln Ser Ile Gln Ala Ala Ala  
1 5 10

<210> 43

<211> 19

<212> PRT

<213> Mycobacterium tuberculosis

<400> 43

Pro Ala Pro Asp Gly Tyr Pro Ile Ile Asn Tyr Glu Tyr Ala Ile Val  
1 5 10 15

Asn Asn Arg

<210> 44

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 44

Ala Ile Thr Asp Gly Asn Lys Ala Ser Phe Leu Asp Gln Val His Phe  
1 5 10 15

Gln Pro Leu Pro  
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<210> 45

<211> 13

<212> PRT

<213> Mycobacterium tuberculosis

<400> 45

Ala Ser Phe Leu Asp Gln Val His Phe Gln Pro Leu Pro  
1 5 10

<210> 46

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 46

Ile Arg Leu His Thr Leu Leu Ala Val Leu Thr Ala Ala Pro Leu Leu  
1 5 10 15

Leu Ala Ala Ala  
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<210> 47

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 47

Asn Phe Leu Leu Pro Asp Ala Gln Ser Ile Gln Ala Ala Ala Ala Gly  
1 5 10 15

Phe Ala Ser Lys  
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<210> 48

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 48

Tyr Ala Ile Val Asn Asn Arg Gln Lys Asp Ala Ala Thr Ala Gln Thr  
1 5 10 15

Leu Gln Ala Phe  
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<210> 49

<211> 17  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 49  
Thr Gly Ser Gly Ala Gly Ile Ala Gln Ala Ala Ala Gly Thr Val Asn  
1 5 10 15

Ile

<210> 50  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 50  
Met Ala Ala His Lys Gly Leu Met Asn Ile Ala Leu Ala Ile Ser Ala  
1 5 10 15

Gln Gln Val Asn  
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<210> 51  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 51  
Leu Asn Pro Gly Val Asn Leu Pro Gly Thr Ala Val Val Pro Leu His  
1 5 10 15

Arg Ser Asp Gly  
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<210> 52  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 52  
Ala Glu Thr Pro Gly Cys Val Ala Tyr Ile Gly Ile Ser Phe Leu Asp  
1 5 10 15

Gln Ala Ser Gln  
20

<210> 53  
<211> 21  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 53  
Ile Arg Leu His Thr Leu Leu Ala Val Leu Thr Ala Ala Pro Leu Leu

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|---|---|----|----|
| 1 | 5 | 10 | 15 |
|---|---|----|----|

Leu Ala Ala Ala Gly  
20

<210> 54  
 <211> 13  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 54  
 Ala Gly Ala Gly Thr Val Ala Thr Thr Pro Ala Ser Ser  
 1 5 10

<210> 55  
 <211> 18  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 55  
 Thr Gly Ser Gly Ala Gly Ile Ala Gln Ala Ala Ala Gly Thr Val Asn  
 1 5 10 15

Ile Gly

<210> 56  
 <211> 23  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 56  
 Asp Met Ala Ala His Lys Gly Leu Met Asn Ile Ala Leu Ala Ile Ser  
 1 5 10 15

Ala Gln Gln Val Asn Tyr Asn  
20

<210> 57  
 <211> 14  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 57  
 Pro Gln Ile Ala Ala Leu Asn Pro Gly Val Asn Leu Pro Gly  
 1 5 10

<210> 58  
 <211> 23  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 58

Phe Leu Leu Pro Asp Ala Gln Ser Ile Gln Ala Ala Ala Ala Gly Phe  
1 5 10 15

Ala Ser Lys Thr Pro Ala Asn  
20

<210> 59  
<211> 13  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 59  
Asn Phe Ala Gly Ile Glu Ala Ala Ala Ser Ala Ile Gln  
1 5 10

<210> 60  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 60  
Gln Trp Asn Phe Ala Gly Ile Glu Ala Ala Ala Ser Ala Ile Gln Gly  
1 5 10 15

Asn Val Thr Ser  
20

<210> 61  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 61  
Asn Phe Ala Gly Ile Glu Ala Ala Ala Ser Ala Ile Gln Gly Asn Val  
1 5 10 15

Thr Ser Ile His  
20

<210> 62  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 62  
Ile Gln Gly Asn Val Thr Ser Ile His Ser Leu Leu Asp Glu Gly Lys  
1 5 10 15

Gln Ser Leu Thr  
20

<210> 63  
<211> 16

<212> PRT  
 <213> Mycobacterium tuberculosis

<400> 63  
 Thr Glu Leu Asn Asn Ala Leu Gln Asn Leu Ala Arg Thr Ile Ser Glu  
           1                  5                  10                  15

<210> 64  
 <211> 20  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 64  
 Leu Met Ile Gly Thr Ala Ala Ala Val Val Leu Pro Gly Leu Val Gly  
           1                  5                  10                  15

Leu Ala Gly Gly  
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<210> 65  
 <211> 20  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 65  
 Glu Tyr Trp Gly Ala Gln Leu Asn Ala Met Lys Gly Asp Leu Gln Ser  
           1                  5                  10                  15

Ser Leu Gly Ala  
                   20

<210> 66  
 <211> 16  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 66  
 Trp Tyr Tyr Gln Ser Gly Leu Ser Ile Val Met Pro Val Gly Gly Gln  
           1                  5                  10                  15

<210> 67  
 <211> 19  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 67  
 Gln Gln Phe Ile Tyr Ala Gly Ser Leu Ser Ala Leu Leu Asp Pro Ser  
           1                  5                  10                  15

Gln Gly Met

<210> 68

<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 68  
Val Val Leu Gly Trp Lys Val Ser Asp Leu Lys Ser Ser Thr Ala Val  
1 5 10 15

Ile Pro Gly Tyr  
20

<210> 69  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 69  
Val Ser Asp Leu Lys Ser Ser Thr Ala Val Ile Pro Gly Tyr Pro Val  
1 5 10 15

Ala Gly Gln Val  
20

<210> 70  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 70  
Ile Arg Gly Ser Val Thr Pro Ala Val Ser Gln Phe Asn Ala Arg Thr  
1 5 10 15

Ala Asp Gly Ile  
20

<210> 71  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 71  
Ile Lys Ile Phe Met Leu Val Thr Ala Val Val Leu Leu Cys Cys Ser  
1 5 10 15

Gly Val Ala Thr  
20

<210> 72  
<211> 20  
<212> PRT  
<213> Mycobacterium tuberculosis

<400> 72  
Tyr Asn Ile Asn Ile Ser Leu Pro Ser Tyr Tyr Pro Asp Gln Lys Ser

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|---|---|----|----|

Leu Glu Asn Tyr  
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<210> 73  
 <211> 21  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 73  
 Ala Ile Pro Pro Arg Gly Thr Gln Ala Val Val Leu Lys Val Tyr Gln  
 1 5 10 15

Asn Ala Ala Gly Gly  
20

<210> 74  
 <211> 20  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 74  
 Ala Thr Ser Phe Ala Ala Ala Gly Leu Ala Ala Leu Ala Val Ala Val  
 1 5 10 15

Ser Pro Pro Ala  
20

<210> 75  
 <211> 20  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 75  
 Ser Phe Ala Ala Ala Gly Leu Ala Ala Leu Ala Val Ala Val Ser Pro  
 1 5 10 15

Pro Ala Ala Ala  
20

<210> 76  
 <211> 13  
 <212> PRT  
 <213> Mycobacterium tuberculosis

<400> 76  
 Val Asn Leu Val Asp Thr Leu Asn Ser Gly Gln Tyr Thr  
 1 5 10

<210> 77  
 <211> 20  
 <212> PRT



<213> Mycobacterium tuberculosis

<400> 77

Ala Ala Phe Ser Lys Leu Pro Ala Ser Thr Ile Asp Glu Leu Lys Thr  
1 5 10 15

Asn Ser Ser Leu  
20

<210> 78

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 78

Ile Asp Glu Leu Lys Thr Asn Ser Ser Leu Leu Thr Ser Ile Leu Thr  
1 5 10 15

Tyr His Val Val  
20

<210> 79

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 79

Leu Thr Ser Ile Leu Thr Tyr His Val Val Ala Gly Gln Thr Ser Pro  
1 5 10 15

Ala Asn Val Val  
20

<210> 80

<211> 19

<212> PRT

<213> Mycobacterium tuberculosis

<400> 80

Gly Val Ser Thr Ala Asn Ala Thr Val Tyr Met Ile Asp Ser Val Leu  
1 5 10 15

Met Pro Pro

<210> 81

<211> 16

<212> PRT

<213> Mycobacterium tuberculosis

<400> 81

Ile Gly Leu Ser Met Ala Gly Ser Ser Ala Met Ile Leu Ala Ala Tyr  
1 5 10 15